

# RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.

Application Serial Number: 10/539,208  
Source: 1FWP  
Date Processed by STIC: 10/12/06

# ***ENTERED***



IFWP

## RAW SEQUENCE LISTING

DATE: 10/12/2006

PATENT APPLICATION: US/10/539,208

TIME: 09:26:31

Input Set : A:\B&amp;B-135.ST25.txt

Output Set: N:\CRF4\10122006\J539208.raw

3 <110> APPLICANT: Raab, David  
 4 Graf, Marcus  
 5 Notka, Frank  
 6 Wagner, Ralf  
 8 <120> TITLE OF INVENTION: Method and Device for Optimizing a Nucleotide  
 Sequence for the

9 Purpose of Expression of a Protein

11 <130> FILE REFERENCE: B&B-135

13 <140> CURRENT APPLICATION NUMBER: 10/539,208

14 <141> CURRENT FILING DATE: 2005-06-17

16 <150> PRIOR APPLICATION NUMBER: PCT/EP03/14850

17 <151> PRIOR FILING DATE: 2003-12-23

19 <150> PRIOR APPLICATION NUMBER: DE 10260805.9

20 <151> PRIOR FILING DATE: 2002-12-23

22 <160> NUMBER OF SEQ ID NOS: 32

24 <170> SOFTWARE: PatentIn version 3.3

26 <210> SEQ ID NO: 1

27 <211> LENGTH: 435

28 <212> TYPE: DNA

29 <213> ORGANISM: Homo sapiens

31 <400> SEQUENCE: 1

32 atgtggctgc agagcctgct gctcttgggc actgtggcct gcagcatctc tgcacccgcc 60  
 34 cgctcgccca gcccagcac gcagccttg gagcatgtga atgccatcca ggaggcccg 120  
 36 cgtctcctga acctgagtag agacactgct gctgagatga atgaaacagt agaagtcac 180  
 38 tcagaaatgt ttgacctcca ggagccgacc tgcctacaga cccgcctgga gctgtacaag 240  
 40 cagggcctgc ggggcagcct caccaagctc aagggcccct tgaccatgat ggccagccac 300  
 42 tacaagcagc actgccctcc aaccccgaa acttcctgtg caaccagat tatcaccttt 360  
 44 gaaagtttca aagagaacct gaaggacttt ctgcttgta tcccctttga ctgctgggag 420  
 46 ccagtccagg agtag 435

49 <210> SEQ ID NO: 2

50 <211> LENGTH: 435

51 <212> TYPE: DNA

52 <213> ORGANISM: Homo sapiens

54 <400> SEQUENCE: 2

55 atgtggctgc agagcctgct gctgctggga acagtggcct gtagcatctc tgcccctgcc 60  
 57 agaagcccta gccttagcac acagccttg gagcacgtga atgccatcca ggaggccagg 120  
 59 agactgctga acctgagcag agatacagcc gccgagatga acgagaccgt ggaggtgatc 180  
 61 agcgagatgt tcgacctgca ggagcctaca tgcctgcaga cccggctgga gctgtataag 240  
 63 cagggcctga gaggtctct gaccaagctg aagggcccc tgacaatgat ggccagccac 300  
 65 tacaagcagc actgccctcc taccctgag acaagctgcg ccaccagat catcaccttc 360  
 67 gagagcttca aggagaacct gaaggacttc ctgctggtga tccccttcga ttgctgggag 420  
 69 cccgtgcagg agtag 435

72 <210> SEQ ID NO: 3

73 <211> LENGTH: 489

*see p. 8*

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74 <212> TYPE: DNA
75 <213> ORGANISM: Homo sapiens
77 <400> SEQUENCE: 3
78 atgagaattt cgaaaccaca ttgagaagt atttccatcc agtgctactt gtgtttactt      60
80 ctaaacagtc attttctaac tgaagctggc attcatgtct tcattttggg ctgtttcagt      120
82 gcagggttc ctaaaacaga agccaaactgg gtgaatgtaa taagtgattt gaaaaaaatt      180
84 gaagatctta ttcaatctat gcatattgat gctactttat atacggaaag tgatgttcac      240
86 ccagttgca aagtaacagc aatgaagtgc tttctcttgg agttacaagt tatttcactt      300
88 gagtccggag atgcaagtat tcatgatata gtagaaaatc tgatcatcct agcaaacac      360
90 agtttgtctt ctaatgggaa tgtaacagaa tctggatgca aagaatgtga ggaactggag      420
92 gaaaaaaata ttaaagaatt ttgacagagt ttgtacata ttgtccaaat gttcatcaac      480
94 acttcttag                                     489
97 <210> SEQ ID NO: 4
98 <211> LENGTH: 489
99 <212> TYPE: DNA
100 <213> ORGANISM: Homo sapiens
102 <400> SEQUENCE: 4
103 atgcggatca gcaagcccca cctgaggagc atcagcatcc agtgctacct gtgcctgctg      60
105 ctgaacagcc acttcctgac agaggccggc atccacgtgt ttatcctggg ctgcttctct      120
107 gccggcctgc ctaagacaga ggccaaactgg gtgaacgtga tcagcgacct gaagaagatc      180
109 gaggacctga tccagagcat gcacatcgac gccacctgt acacagagag cgacgtgcac      240
111 cctagctgta aggtgaccgc catgaagtgc ttcctgctgg agctgcaggt gatcagcctg      300
113 gagagcggcg atgccagcat ccacgacacc gtggagaacc tgatcatcct ggccaacaac      360
115 agcctgagca gcaacggcaa tgtgaccgag agcggctgca aggagtgtga ggagctggag      420
117 gagaagaaca tcaaggagtt cctgcagagc ttcgtgcaca tcgtgcagat gttcatcaac      480
119 accagctag                                     489
122 <210> SEQ ID NO: 5
123 <211> LENGTH: 426
124 <212> TYPE: DNA
125 <213> ORGANISM: Mus musculus
127 <400> SEQUENCE: 5
128 atgtggctgc agaatttact tttcctgggc attgtggtct acagcctctc agcaccacc      60
130 cgctcaccca tctctgtcac ccggccttgg aagcatgtag aggccatcaa agaagccctg      120
132 aacctcctgg atgacatgcc tgtcacattg aatgaagagg tagaagtcgt ctctaacgag      180
134 ttctccttca agaagctaac atgtgtgcag acccgctga agatattcga gcagggtcta      240
136 cggggcaatt tcacaaaact caaggcgcc ttgaacatga cagccagcta ctaccagaca      300
138 tactgcccc caactccgga aacggactgt gaaacacaag ttaccaccta tgcggatttc      360
140 atagacagcc ttaaaacctt tctgactgat atcccccttg aatgcaaaaa accaggccaa      420
142 aaatag                                     426
145 <210> SEQ ID NO: 6
146 <211> LENGTH: 426
147 <212> TYPE: DNA
148 <213> ORGANISM: Mus musculus
150 <400> SEQUENCE: 6
151 atgtggctgc agaacctgct gttcctgggc atcgtggtgt acagcctgag cgccccacc      60
153 aggagcccca tcaccgtgac caggccctgg aagcacgtgg aggccatcaa ggaggccctg      120
155 aacctgctgg acgacatgcc cgtgaccctg aacgaggagg tggaggtggt gagcaacgag      180
157 ttcagcttca agaagctgac ctgcgtgcag accaggctga agatcttcga gcagggcctg      240
159 aggggcaact tcaccaagct gaaggcgcc ctgaacatga ccgccagcta ctaccagacc      300

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161 tactgcccc ccacccccga gaccgactgc gagacccagg tgaccaccta cgccgacttc      360
163 atcgacagcc tgaagacctt cctgaccgac atccccttcg agtgcaagaa gcccggccag      420
165 aagtag                                          426
168 <210> SEQ ID NO: 7
169 <211> LENGTH: 279
170 <212> TYPE: DNA
171 <213> ORGANISM: Mus musculus
173 <400> SEQUENCE: 7
174 atgaaggtct ccaccactgc ccttgctgtt cttctctgta ccatgacact ctgcaacca      60
176 gtcttctcag cgccatatgg agctgacacc ccgactgcct gctgcttctc ctacagccgg      120
178 aagattccac gccaatcat cgttgactat ttgaaacca gcagcctttg ctcccagcca      180
180 ggtgtcattt tcctgactaa gagaaaccgg cagatctgcg ctgactccaa agagacctgg      240
182 gtccaagaat acatcactga cctggaactg aatgcctag                                          279
185 <210> SEQ ID NO: 8
186 <211> LENGTH: 279
187 <212> TYPE: DNA
188 <213> ORGANISM: Mus musculus
190 <400> SEQUENCE: 8
191 atgaaggtga gcaccacagc tctggctgtg ctgctgtgca ccatgaccct gtgcaaccag      60
193 gtgttcagcg ctcttacgg cgccgatacc cctacagcct gctgcttcag ctacagcagg      120
195 aagatcccca ggcagttcat cgtggactac ttcgagacca gcagcctgtg ttctcagccc      180
197 ggcgtgatct tcctgaccaa gcggaacaga cagatctgcg ccgacagcaa ggagacatgg      240
199 gtgcaggagt acatcaccga cctggagctg aacgcctag                                          279
202 <210> SEQ ID NO: 9
203 <211> LENGTH: 42
204 <212> TYPE: DNA
205 <213> ORGANISM: Artificial Sequence
207 <220> FEATURE:
208 <223> OTHER INFORMATION: Optimal DNA sequence corresponding to
hypothetical amino acid
209     sequence.
212 <220> FEATURE:
213 <221> NAME/KEY: misc_feature
214 <222> LOCATION: (42)..(42)
215 <223> OTHER INFORMATION: n' = a, t, g, or c
217 <400> SEQUENCE: 9
W--> 218 garcarttya thathaaraa yatgttyath athaaraayg cn      42
221 <210> SEQ ID NO: 10
222 <211> LENGTH: 14
223 <212> TYPE: PRT
224 <213> ORGANISM: Artificial Sequence
226 <220> FEATURE:
227 <223> OTHER INFORMATION: Hypothetical amino acid sequence.
229 <400> SEQUENCE: 10
231 Glu Gln Phe Ile Ile Lys Asn Met Phe Ile Ile Lys Asn Ala
232 1          5          10
235 <210> SEQ ID NO: 11
236 <211> LENGTH: 9
237 <212> TYPE: DNA
238 <213> ORGANISM: Artificial Sequence

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## RAW SEQUENCE LISTING

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Input Set : A:\B&amp;B-135.ST25.txt

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240 <220> FEATURE:  
 241 <223> OTHER INFORMATION: Combination DNA Sequence for amino acid SEQ ID  
 NO: 10.  
 243 <400> SEQUENCE: 11  
 244 garcartty 9  
 247 <210> SEQ ID NO: 12  
 248 <211> LENGTH: 9  
 249 <212> TYPE: DNA  
 250 <213> ORGANISM: Artificial Sequence  
 252 <220> FEATURE:  
 253 <223> OTHER INFORMATION: Combination DNA Sequence for amino acid SEQ ID  
 NO: 10.  
 255 <400> SEQUENCE: 12  
 256 carttyath 9  
 259 <210> SEQ ID NO: 13  
 260 <211> LENGTH: 9  
 261 <212> TYPE: DNA  
 262 <213> ORGANISM: Artificial Sequence  
 264 <220> FEATURE:  
 265 <223> OTHER INFORMATION: Combination DNA Sequence for amino acid SEQ ID  
 NO: 10.  
 267 <400> SEQUENCE: 13  
 268 ttyathath 9  
 271 <210> SEQ ID NO: 14  
 272 <211> LENGTH: 9  
 273 <212> TYPE: DNA  
 274 <213> ORGANISM: Artificial Sequence  
 276 <220> FEATURE:  
 277 <223> OTHER INFORMATION: Combination DNA Sequence for amino acid SEQ ID  
 NO: 10.  
 279 <400> SEQUENCE: 14  
 280 athathaar 9  
 283 <210> SEQ ID NO: 15  
 284 <211> LENGTH: 9  
 285 <212> TYPE: DNA  
 286 <213> ORGANISM: Artificial Sequence  
 288 <220> FEATURE:  
 289 <223> OTHER INFORMATION: Combination DNA Sequence for amino acid SEQ ID  
 NO: 10.  
 291 <400> SEQUENCE: 15  
 292 athaaraay 9  
 295 <210> SEQ ID NO: 16  
 296 <211> LENGTH: 9  
 297 <212> TYPE: DNA  
 298 <213> ORGANISM: Artificial Sequence  
 300 <220> FEATURE:  
 301 <223> OTHER INFORMATION: Combination DNA Sequence for amino acid SEQ ID  
 NO: 10.  
 303 <400> SEQUENCE: 16  
 304 aaraayatg 9  
 307 <210> SEQ ID NO: 17  
 308 <211> LENGTH: 9  
 309 <212> TYPE: DNA

310 <213> ORGANISM: Artificial Sequence  
312 <220> FEATURE:

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/539,208

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Input Set : A:\B&amp;B-135.ST25.txt

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313 <223> OTHER INFORMATION: Combination DNA Sequence for amino acid SEQ ID
NO: 10.
315 <400> SEQUENCE: 17
316 aayatgtty 9
319 <210> SEQ ID NO: 18
320 <211> LENGTH: 9
321 <212> TYPE: DNA
322 <213> ORGANISM: Artificial Sequence
324 <220> FEATURE:
325 <223> OTHER INFORMATION: Combination DNA Sequence for amino acid SEQ ID
NO: 10.
327 <400> SEQUENCE: 18
328 atgttyath 9
331 <210> SEQ ID NO: 19
332 <211> LENGTH: 9
333 <212> TYPE: DNA
334 <213> ORGANISM: Artificial Sequence
336 <220> FEATURE:
337 <223> OTHER INFORMATION: Combination DNA Sequence for amino acid SEQ ID
NO: 10.
339 <400> SEQUENCE: 19
340 ttyathath 9
343 <210> SEQ ID NO: 20
344 <211> LENGTH: 9
345 <212> TYPE: DNA
346 <213> ORGANISM: Artificial Sequence
348 <220> FEATURE:
349 <223> OTHER INFORMATION: Combination DNA Sequence for amino acid SEQ ID
NO: 10.
351 <400> SEQUENCE: 20
352 athathaar 9
355 <210> SEQ ID NO: 21
356 <211> LENGTH: 9
357 <212> TYPE: DNA
358 <213> ORGANISM: Artificial Sequence
360 <220> FEATURE:
361 <223> OTHER INFORMATION: Combination DNA Sequence for amino acid SEQ ID
NO: 10.
363 <400> SEQUENCE: 21
364 athaaraay 9
367 <210> SEQ ID NO: 22
368 <211> LENGTH: 9
369 <212> TYPE: DNA
370 <213> ORGANISM: Artificial Sequence
372 <220> FEATURE:
373 <223> OTHER INFORMATION: Combination DNA Sequence for amino acid SEQ ID
NO: 10.
376 <220> FEATURE:
377 <221> NAME/KEY: misc_feature
378 <222> LOCATION: (9)...(9)
379 <223> OTHER INFORMATION: n = a, t, g, or c
381 <400> SEQUENCE: 22
W--> 382 aaraaygcn 9

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385 <210> SEQ ID NO: 23  
386 <211> LENGTH: 238



RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/539,208

DATE: 10/12/2006  
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FYI

Input Set : A:\B&B-135.ST25.txt  
Output Set: N:\CRF4\10122006\J539208.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220>

to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:9; N Pos. 42  
Seq#:22; N Pos. 9  
Seq#:24; N Pos. 10  
Seq#:26; N Pos. 7  
Seq#:27; N Pos. 7  
Seq#:28; N Pos. 10  
Seq#:29; N Pos. 7  
Seq#:30; N Pos. 8  
Seq#:31; N Pos. 9  
Seq#:32; N Pos. 10

## VERIFICATION SUMMARY

PATENT APPLICATION: US/10/539,208

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Input Set : A:\B&amp;B-135.ST25.txt

Output Set: N:\CRF4\10122006\J539208.raw

L:218 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0  
L:382 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0  
L:472 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0  
L:502 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0  
L:520 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:0  
L:538 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:0  
L:556 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:0  
L:574 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:0  
L:592 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:0  
L:610 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:0